5.17.07 FINENESS MODULUS OF AGGREGATES (GRADATION FACTOR)

(a) Scope.

This method covers the procedure for calculating the fineness modulus (also known as the gradation factor) of aggregates.

This abstract, but useful figure indicates the relative fineness or coarseness of an aggregate gradation and indicates to some extent, the distribution of sizes of the aggregate if the maximum size is known.

(b) Procedure.

The fineness modulus is determined by adding the percentages by mass retained on the following sieves meeting AASHTO designation M92, and dividing by 100

75mm (3"), 3.75mm (1 1/2"), 19mm (3/4"), 9.5mm (3/8"), 4.75mm (No. 4), 2.36mm (No. 8), 1.18mm (No. 16), 600µm (No. 30), 300µm (No. 50) and 150µm (No. 100).

Example:

For the following gradation.

Sieve Size		Percent Retained
(SI)	(English)	
9.5mm	3/8"	0
4.75mm	No. 4	2
2.36mm	No. 8	16
1.18mm	No. 16	27
600µm	No. 30	62
300µm	No. 50	88
150µm	No. 100	96

The fineness modulus (gradation factor) is:

$$\frac{2+16+27+62+88+96}{100} = 2.91$$